

Claims

What is claimed is:

- 5 1. A trailer hitch safety hold-down device for preventing decoupling of a trailer arm socket and towing vehicle hitch ball, the device comprising:
 - a mounting base comprising a rigid horizontal support extending rearwardly away from a towing vehicle, the horizontal support having a trailer hitch ball secured thereon, the trailer hitch ball adapted for receiving a socket thereon from a trailer arm, and a rigid
 - 10 vertical post secured to the horizontal support, and, secured between the mounting base and a towing vehicle, a rigid horizontal attaching arm securely attached to the mounting base and extending from the mounting base to a towing vehicle, the attaching arm adapted for attachment to a towing vehicle;
 - a rigid tubular column secured to the vertical post spaced from the trailer hitch ball
 - 15 between the trailer hitch ball and a towing vehicle, the tubular column having a vertical opening therethrough and a top opening communicating with the vertical opening and at least one pair of mating openings through the tubular column from a first side to a second side;
 - a hold down bracket having a rigid hold down shaft adapted to fit slidably and
 - 20 removably within the vertical opening of the tubular column, the hold down shaft having a series of horizontal openings therethrough spaced apart along its length, the series of horizontal openings adapted for alternately mating with the at least one pair of mating openings of the tubular column, a broad rigid horizontal retaining plate extending from

the hold down shaft is adapted for positioning just above a trailer arm socket mounted on the trailer hitch ball to prevent a trailer arm socket from separating from the trailer hitch ball;

a rigid pin secured to the mounting base by a flexible means for retaining the pin, the

5 pin adapted for insertion between the tubular column and the hold down shaft through the at least one horizontal opening through the tubular column and one of the series of horizontal openings in the hold down shaft to secure the hold down shaft in place within the tubular column with the retaining plate at a desired height for retaining a trailer arm socket from a trailer arm on the trailer hitch ball.

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2. The hold down device of claim 1 wherein the retaining plate comprises a broad outwardly expanding horizontal thick gage steel plate adapted for retaining a trailer arm socket on the trailer hitch ball through a full range of angular motion of a trailer arm relative to the trailer hitch ball.

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3. The hold down device of claim 1 wherein the retaining plate is mounted on the hold down shaft by an L-shaped vertical plate extending from the retaining plate over the top of the hold down shaft and secured thereto.

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4. The hold down device of claim 1 wherein the hold down bracket is attached to the flexible means for retaining the pin.

5. The hold down device of claim 4 wherein the flexible means for retaining the pin comprises a chain.

6. The hold down device of claim 1 further comprising a guide device comprising a rigid guide shaft adapted to fit slidably and removably within the vertical opening of the tubular column with the hold down shaft removed therefrom, the guide shaft having a series of horizontal guide shaft openings therethrough spaced apart along its length, the series of horizontal guide shaft openings adapted for alternately mating with the at least one pair of mating openings of the tubular column, and a pair of angled vertical walls extending outwardly in a V shape with one wall on each side of the trailer hitch ball for guiding and aligning the trailer arm socket and trailer hitch ball for interconnection.

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7. The hold down device of claim 1 wherein the vertical opening in the tubular column and the guide shaft have mating rectangular cross-sectional configurations.

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8. The hold down device of claim 1 wherein the mounting base and the mounting arm are permanently secured together in a single unit adapted for attaching to a towing vehicle.

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9. The hold down device of claim 1 wherein the horizontal support and the vertical post form an L-shaped unit removably attachable to an existing trailer hitch with the

horizontal support bolted between an existing trailer hitch ball and an existing trailer hitch base attachable to a towing vehicle.

10. The hold down device of claim 1 wherein the vertical opening in the tubular column and the hold down shaft have mating rectangular cross-sectional configurations.